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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/725,032	11/29/2000	Mikio Sanada	35.C14959	8953

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EXAMINER

NOLAN, SANDRA M

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 06/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/725,032	SANADA ET AL.	
	Examiner	Art Unit	
	Sandra M. Nolan	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004 and 10 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-71 is/are pending in the application.
- 4a) Of the above claim(s) 1-15 and 23-71 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims

1. Claims 1-71 are pending. Claims 16-22 are before the examiner. Claims 1-15 and 23-71 have been withdrawn.

Withdrawal of Rejections

2. The 35 USC 112 rejection of claims 16-22, as stated in sections 10-11 of the 06 August 2003 office action, is hereby withdrawn in view of applicants' arguments in their 10 November 2003 and 16 April 2004 responses (the November/April responses).

3. The 35 USC 102 rejection of claims 16 and 18-20 as anticipated by Taskier (US 3,853,601), as discussed in section 13 of the 06 August 2003 office action, is withdrawn in view of the arguments in the November/April responses.

4. The 35 USC 102 rejection of claims 16-20 as anticipated by JP-62267359A, as set out in the rejection at the bottom of page 4 of the 06 April 2003 office action, is withdrawn in view of the arguments in the November/April responses.

5. The 35 USC 102 rejection of claims 16-20 as anticipated by JP 63211369A, as explained in section 14 of the 06 April 2003 office action, is withdrawn in view of the arguments in the November/April responses.

6. The 35 USC 102 rejection of claims 16 and 18-20 as anticipated by Cardiff et al (EPO 054f2 485 A1), as recited in section 15 of the 06 April 2003 office action, is withdrawn in view of the arguments in the November/April responses.

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7. The 35 USC 102 rejection of claims 16-21 as anticipated by Schrock et al (US 5,998,650), as discussed in section 17 of the 06 April 2003 office action, is withdrawn in view of the arguments in the November/April responses.

8. The 35 USC 103 rejection of claims 16, 18, 19 and 21 as unpatentable over JP-01030637), as expressed in section 19 of the 06 April 2003 office action, is withdrawn in view of the arguments in the November/April responses.

New Rejections

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claim 16-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

What does "finely fractionalized" mean? Are the polymers ground into fine particles? Are the fractions physical pieces? Please clarify.

11. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim is indefinite because it is confusing. Does the reactive substance contact the element at the same time that the polymer contacts it? What does "substance reactive on said functional group" mean? Please clarify.

Claim Rejections - 35 USC § 102

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12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claim 16 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Matsushita et al (US 5,958,988).

Matsushita teaches polyurethane resins (title) that are hydrolyzed (abstract) in the presence of catalysts (col. 6, lines 65-67) to yield crosslinked particles that react with materials (col. 3, lines 53-59 and col. 7, lines 45-50). It is used with water (col. 4, lines 39-43).

The use of reactive surfaces with the hydrolyzed polyurethanes is taught at col. 5, lines 56-58, where coupling agents are discussed.

14. Claim 16 is rejected under 35 U.S.C. 102(e) as being anticipated by Choudhery (US 6,121,387).

Choudhery teaches aqueous (col. 10, lines 50-52) coating compositions containing cleavable carbonyl polymers and multifunctional compounds, in which compositions the polymers are cleaved and the reaction is quenched to produce a functionalized cleaved polymer/multifunctional compound mixture (abstract; col. 4, lines 18-26 and 65-67). The cleaved polymer reacts with its own pieces and with the multifunctional compound (col. 4, lines 41-54). A catalyst is used (col. 13, line 43).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

17. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Choudhery or Matsushita.

Both patents are discussed above. They fail to teach that the surface/element to which cleaved molecules contact is curved.

The shape of the article to be contacted with the compositions of Choudhery or Matsushita is deemed a matter of intended use and does not serve to distinguish the treated articles from those suggested or taught by the patents.

Potentially Allowable Subject Matter

18. Claims 18-20 and 22 are dependent upon a rejected base claim, but would be allowable if rewritten to obviate the 35 USC 112 rejections above and to put them in independent form.

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The prior art of record fails to teach or suggest:

- an olefinic substrate that has been contacted with a functionalized and reformed hydrophilic polyalkylsiloxane [per claim 18]; or
- a polymer-treated element wherein:

(I) the polymer is:

- a) a solvent soluble or chemically different from the element,
- b) comprised of functional and non-functional parts, and
- c) made by reacting pieces of functionalized and reformed polymer; and


(II) the element has a colorant-reactive surface [per claim 22].

Response to Arguments

19. Applicant's arguments with respect to claims 16-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication should be directed to Sandra M. Nolan, whose telephone number is 571/272-1495. She can normally be reached on Monday through Thursday, from 6:30 am to 4:00 pm, Eastern Time. If attempts to reach the examiner are unsuccessful, her supervisor, Harold Pyon, can be reached at 571/272-1498. The fax number for patent application documents is 703/872-9306.



S. M. Nolan
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Technology Center 1700

SMN/smn
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